

Patent claims:

1. A polymerizable mixture (P) comprising
 - A) monomer or oligomer (A), each of the monomers
5 or oligomers (A) having at least two polymerizable functional groups which are selected from (meth)acrylate ester, epoxy and vinyl ether groups,
 - B) liquid crystalline monomer or oligomer (B),
10 each of the monomers or oligomers (B) having at least one mesogenic group having an aromatic double ring structure and exactly one polymerizable functional group, which is selected from (meth)acrylate ester, epoxy and
15 vinyl ether groups,
 - C) from 1 to less than 50% by weight, based on the polymerizable mixture, of a monomer (C) which has at least one mesogenic group having an aromatic double ring structure and contains no
20 group which can react with the polymerizable functional groups of the monomers or oligomers (A) and (B).
2. The mixture as claimed in claim 1, in which the
25 aromatic double ring structures are selected from two monocyclic groups each of which are linked by a single bond and are selected from unsubstituted and substituted groups 1,4-phenylene, 2,5-pyridinylene and 2,5-pyrenylene and aromatic double rings which
30 are selected from unsubstituted and substituted groups 2,6-naphthylidene, 2,7-naphthylidene and 1,4-naphthylidene.
3. The mixture as claimed in claim 1 or 2, in which the
35 mesogenic groups contain carboxylic esters and alcohols based on phenyl, biphenyl, cyanobiphenyl,

naphthyl and cyanonaphthyl derivatives and combinations of these groups.

4. The mixture as claimed in any of claims 1 to 3, in
5 which the monomers or oligomers (A) have at least one mesogenic group and at least two polymerizable functional groups which are selected from (meth)acrylate ester, epoxy and vinyl ether.
- 10 5. The mixture as claimed in any of claims 1 to 4, which contains from 5 to 95% by weight of monomer or oligomer (A).
- 15 6. The mixture as claimed in any of claims 1 to 5, which contains from 5 to 95% by weight of liquid crystalline monomer or oligomer (B).
- 20 7. An optically anisotropic polymer (F), which can be prepared from the polymerizable mixtures (P) as claimed in any of claims 1 to 6.
- 25 8. The nematic polymer (F) as claimed in claim 7, in which the optical anisotropy Δn is greater than 0.18.
9. The cholesteric polymer (F) as claimed in claim 7, in which the optical anisotropy Δn is greater than 0.16.
- 30 10. A process for the preparation of an optically anisotropic polymer (F) as claimed in claim 7, in which a polymerizable mixture (P) as claimed in any of claims 1 to 6 is applied to a substrate, oriented and then fixed by a polymerization.